



LEGUANG N900 Wireless Router Configuration Guide

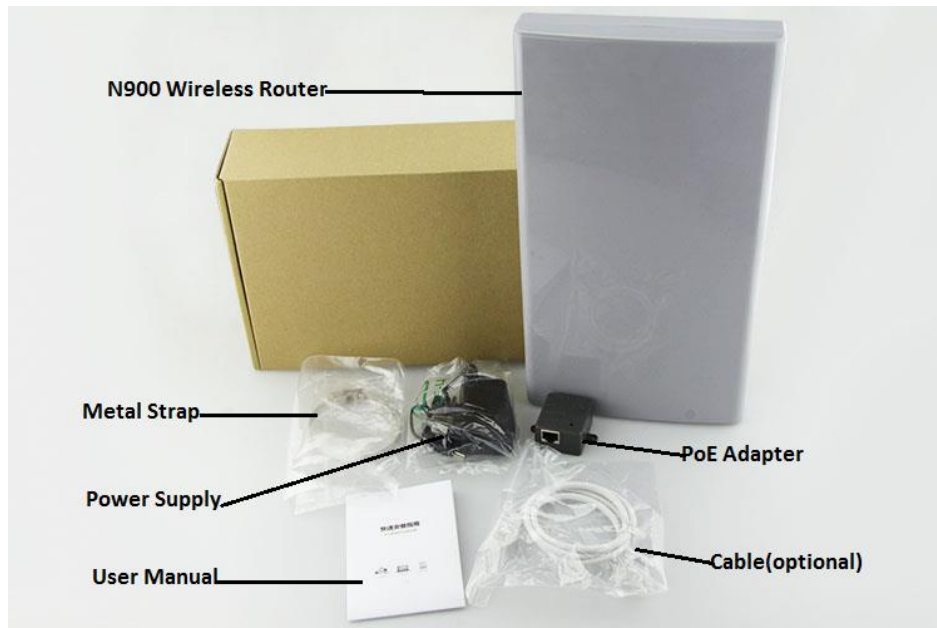
ActForNet Technologies Inc.

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1. What is included



2. Installation Guide

2.1 How to connect

N900 comes with 2 network ports, one of which (beside the four LEDs) is intended to connect local PC or switches and the other is intended to connect service provider to upper level router. N900 can be powered using the DC power supply shipped with the box or using Power over Ethernet (PoE) through WAN port. Using power supply is very straightforward. Just plug the jack of the power supply into the power outlet on the wireless router. When you install N900 outdoor and there is no power outlet around, PoE is a good solution. The black adapter is PoE power supply. It comes with 2 ports: POE and LAN. LAN is used to connect the router or Modem. POE is used to connect to the WAN port of N900.



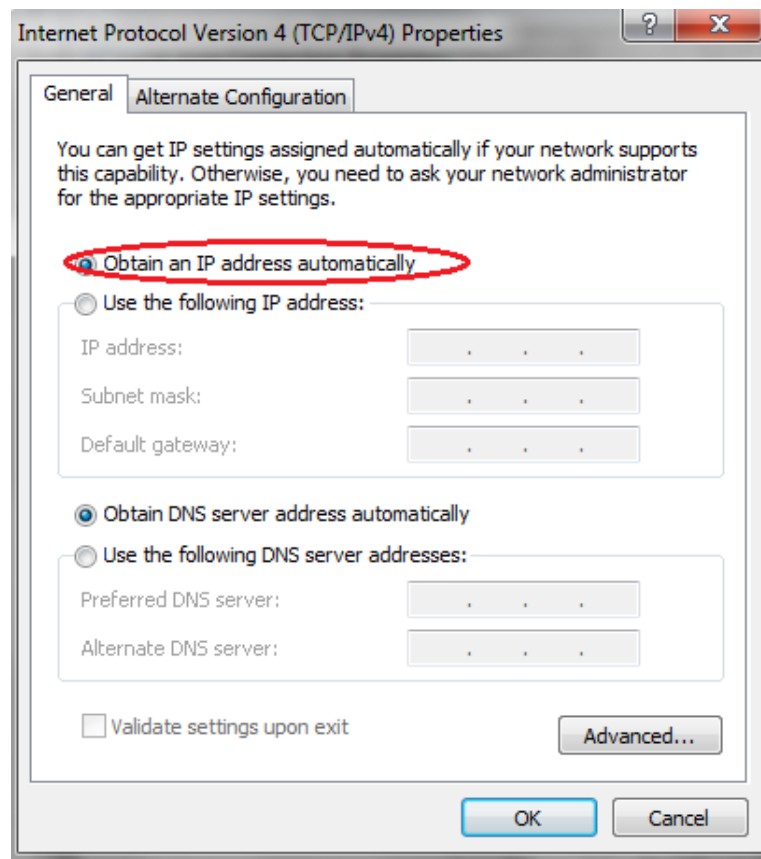


2.2 How to reset

In some cases, you may need to factory reset the system. For example, you forget your password. After the system has boot up which takes about 1 minute, press the RESET button which is located between the power supply plug and LEDs(see diagram above) for around 15 seconds before release it, the system will be reset after reboot with default configuration.

2.3 How to configure your PC for initial setup

The default IP address of the wireless router LAN port is 192.168.1.1. Since DHCP server on LAN port is enabled by default. You can simply enable DHCP on the PC connecting to the LAN port of the wireless router and the PC will get IP address automatically.



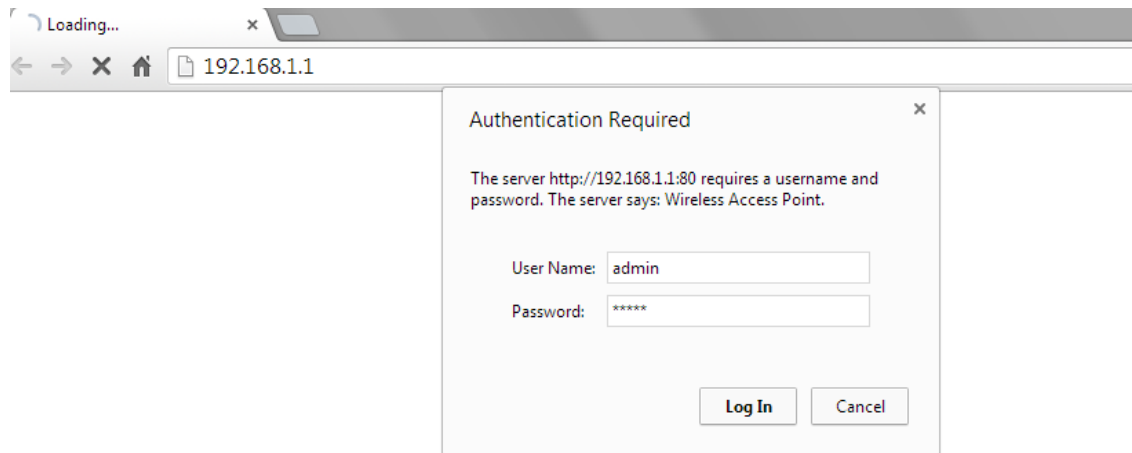
2.4 Login to the wireless router

The factory default IP address: 192.168.1.1

Default username: admin

Default password: admin

Open your browser and type the default IP into the address field, and enter the default user credential as prompted, you should be able access the admin GUI of the wireless router.



3. Wireless Router Configuration

3.1 Wireless Router Operating Modes

LEGUANG N900 supports three operation modes:

- Gateway Mode:** In this mode, the device works as a router, connecting to Internet with WAN port via ADSL/Cable Modem. Local PCs are connected to the router with LAN port or WiFi. Network Address Translation (NAT) is enabled. Local PCs share the same IP to ISP through WAN port. WAN port supports PPPOE, DHCP client or static IP. DHCP server on LAN port is enabled by default to assign IP address to local PCs. With outdoor high gain antenna, N900 can also connect the remote network together to share the Internet connection. It is a very good solution for suburbs or rural area to access Internet. This is the default mode of the equipment.



- Bridge Mode:** In this mode, all Ethernet ports and wireless interface are bridged together so both network ports can be used to connect local PC. NAT function is disabled. All the WAN related function and firewall are not supported. DHCP server on LAN port can be enabled as needed. The device is essentially used as an access point (AP).

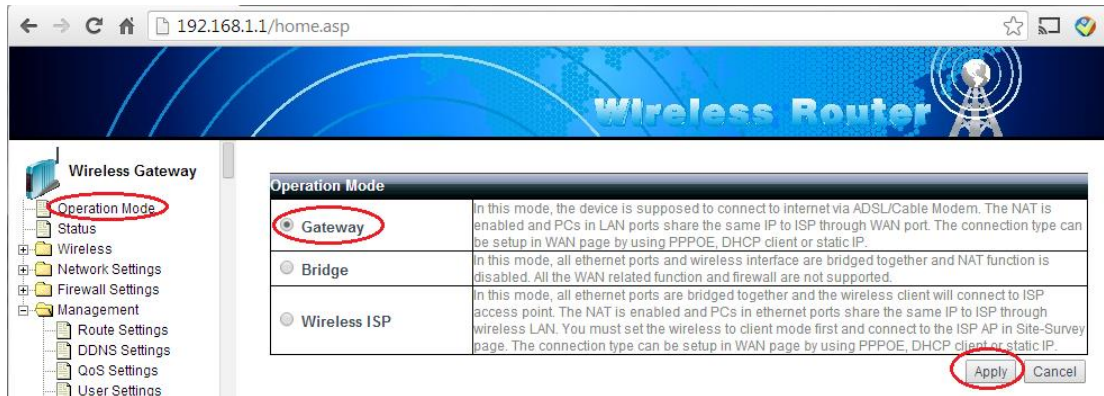


- Wireless ISP:** In this mode, the device works as a wireless client and access point at the same time. It acts as a wireless client to connect to ISP. It also acts as an access point to connect local PCs with WiFi. All Ethernet ports are bridged together so both network ports can be used to connect local PC. The NAT is enabled and all local PCs share the same IP address to access ISP. The difference between Wireless ISP mode and Gateway mode is that Gateway mode uses wired connection while Wireless ISP mode wireless connection to access the service provider.



3.2 Gateway Mode configuration

1. Gateway mode is the default operating mode. If you are running a brand new system, you don't have to make any change to be in this mode. Otherwise you can switch to Gateway mode on operation mode page as following:



2. Configure the LAN settings
In Gateway mode, wireless router can be used as a DHCP server to assign IP address to PCs on local network, either wired or wireless. It is recommended to use the default setting and enable DHCP to avoid IP address conflict.

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The screenshot shows the 'Wireless Router' configuration interface. The left sidebar has a tree view with 'LAN Settings' highlighted. The main content area is divided into two sections: 'LAN IP Setting' and 'DHCP Server Setting'. The 'LAN IP Setting' section has fields for IP Address (192.168.1.1) and Subnet Mask (255.255.255.0). The 'DHCP Server Setting' section has a 'DHCP Server' toggle set to 'Enable', a 'DHCP Client IP' range of 192.168.1.2 to 192.168.1.253, and a 'DHCP Lease Time' of 86400 seconds. Below these is a 'Static DHCP' section with a table for MAC addresses.

Static DHCP Max MAC address counts : 32	
<input type="checkbox"/> DHCP List	Delete
<input type="checkbox"/> Local IP-MAC List	Add Refresh
192.168.1.2/00:26:2D:F1:87:65 Local PC connected	

3. Configure WAN settings

WAN is the port that connects to the service providers and it has to be configured to access the Internet. Wireless router supports Dynamic IP, PPPoE, Static IP or PPTP. Pick the appropriate the settings according to the service provider requirement. For most home users, either PPPoE(ADSL) or dynamic IP (cable modem) should be used.

The screenshot shows the 'Wireless Router' configuration interface. The left sidebar has a tree view with 'WAN Settings' highlighted. The main content area is the 'WAN Setting' section. It has a 'WAN Setting' dropdown menu set to 'Dynamic IP'. Below it is a 'Dynamic IP' section with a 'Set DNS Manually' checkbox. The 'Primary DNS' field is set to 81.134.1.5 and the 'Secondary DNS' field is set to 218.30.19.50. There is an 'Advanced Settings' link and an 'Apply' button.

WAN Setting	
WAN Setting	Dynamic IP
Dynamic IP	Dynamic IP
Set DNS Manually	PPPOE(ADSL)
Static IP	PPTP
Primary DNS	81.134.1.5
Secondary DNS	218.30.19.50

4. Wireless settings

At a minimum, you need to configure the SSID(network name), region, authentication scheme and the key.

Wireless Router

192.168.1.1/home.asp

Wireless Gateway

- Operation Mode
- Status
- Wireless
 - Basic Settings**
 - Virtual AP
 - Access Control
 - WDS Settings
 - Advanced Settings
- Network Settings
- Firewall Settings
- Management

Basic Setting

Status	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
SSID	actfornt	Mode: B,G,N
Regional	FCC	Channel: 11 [2.462 GHz]
Broadcast SSID	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
WMM	<input checked="" type="radio"/> Enable <input type="radio"/> Disable	
Authentication	WPA2PSK	
Encryption	<input type="radio"/> None <input checked="" type="radio"/> WEP64 <input type="radio"/> WEP128 <input type="radio"/> TKIP <input checked="" type="radio"/> AES <input type="radio"/> TKIP/AES	
Key	*****	

Apply

After you click apply, the system will take a few seconds to make the new settings take effect:

Wireless Router

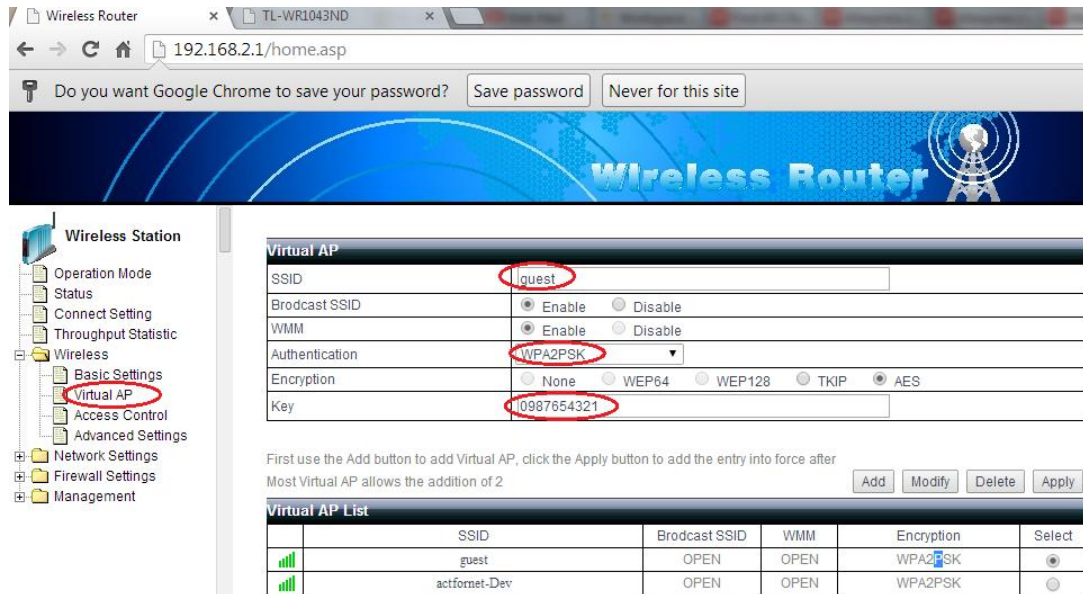
192.168.1.1/home.asp

Wireless Gateway

- Operation Mode
- Status
- Wireless
 - Basic Settings**
 - Virtual AP
 - Access Control
 - WDS Settings
 - Advanced Settings
- Network Settings
- Firewall Settings
- Management

Configuration is being applied.... 60%

In some cases, you may want to set up virtual access point to separate the wireless network. N900 supports up to 2 virtual access points. Click “Virtual AP”, supply the SSID, authentication scheme and key and then click “add”. After you click “Apply”, the system will reboot with newly added virtual access points:



- Now you should be able to see the wireless network you just configured from your PC or tablet, smart phones, etc. Click the network and supply the password/key you just configured to access the network.

3.3 Bridge Mode configuration

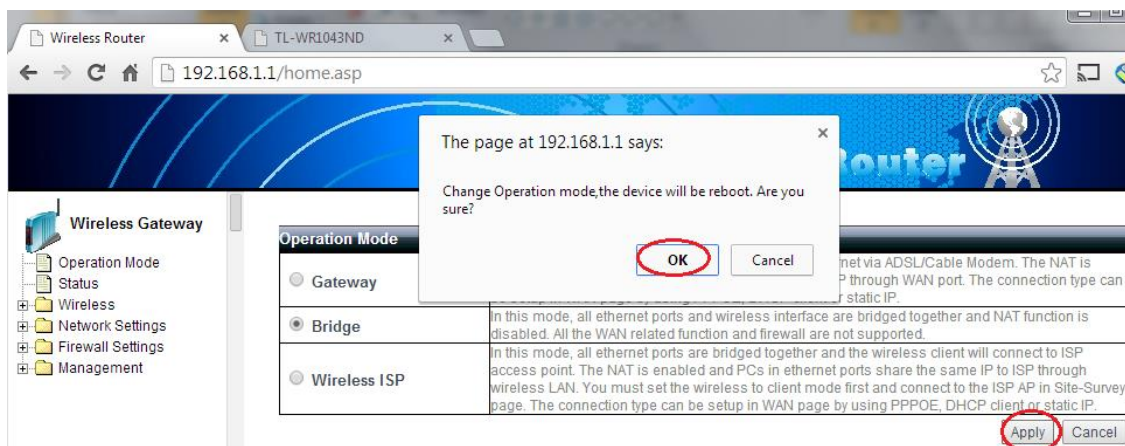
- Switch to bridge mode

Since the default mode is not bridge mode, you need to manually change the operating mode as following:

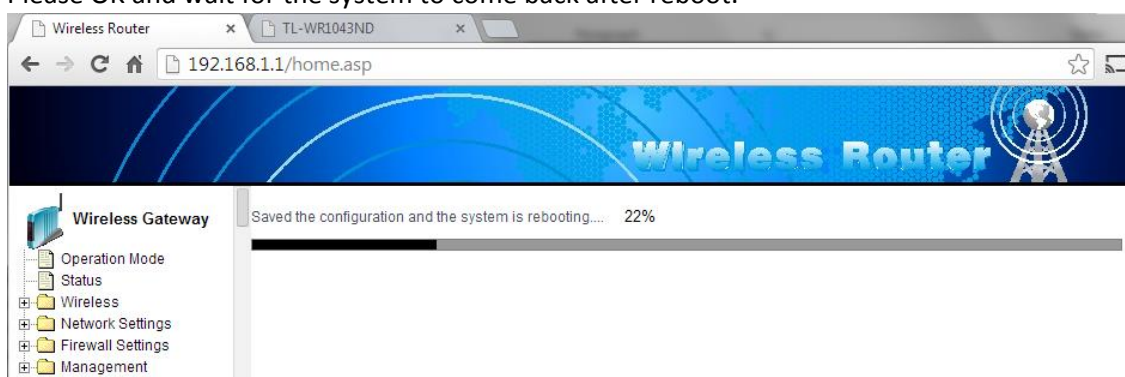


After you click "Apply", the system will ask you to confirm whether to reboot the system to make the change take effect.

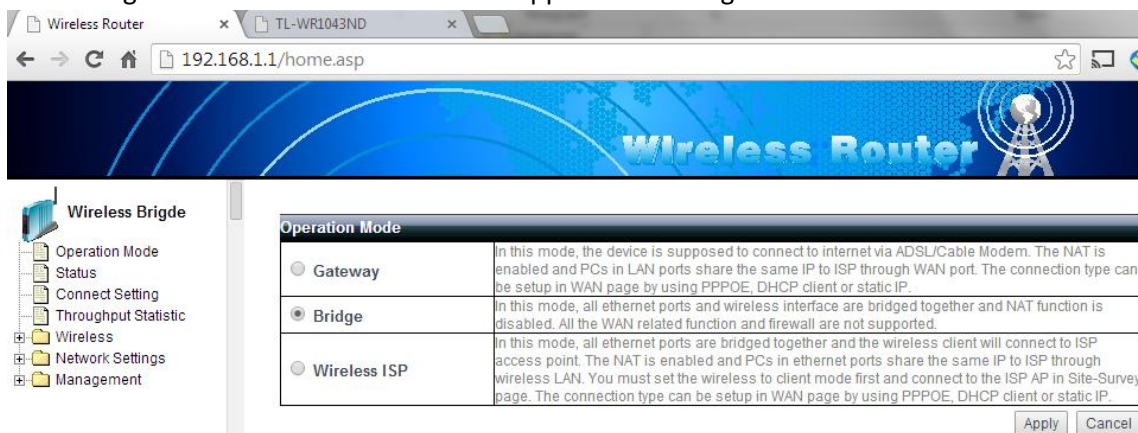
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Please OK and wait for the system to come back after reboot.



2. After the system switches to bridge mode, the GUI will be a bit different because some settings like WAN and Firewall are not applicable in bridge mode.



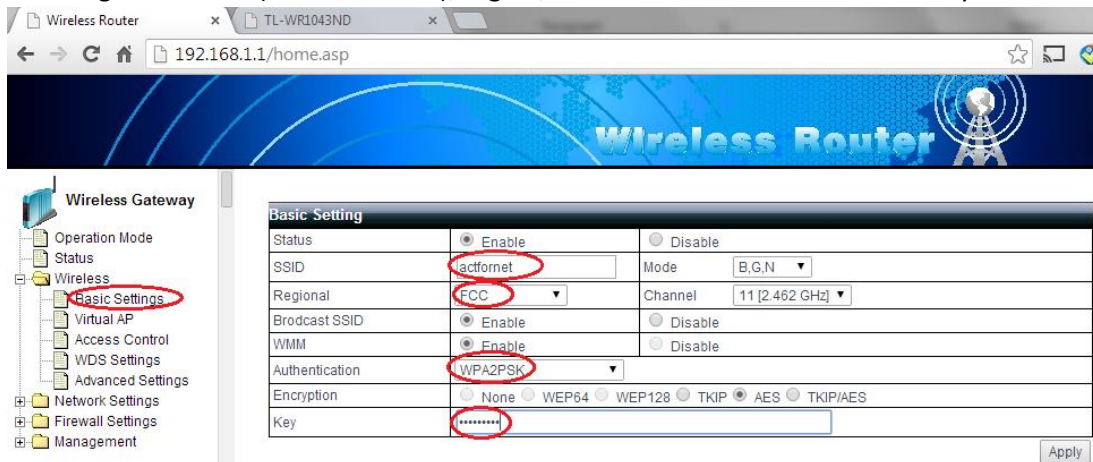
3. Network settings

Only LAN port can be configured in bridge mode. DHCP is disabled by default, which works for most cases. But you can enable it if desired:

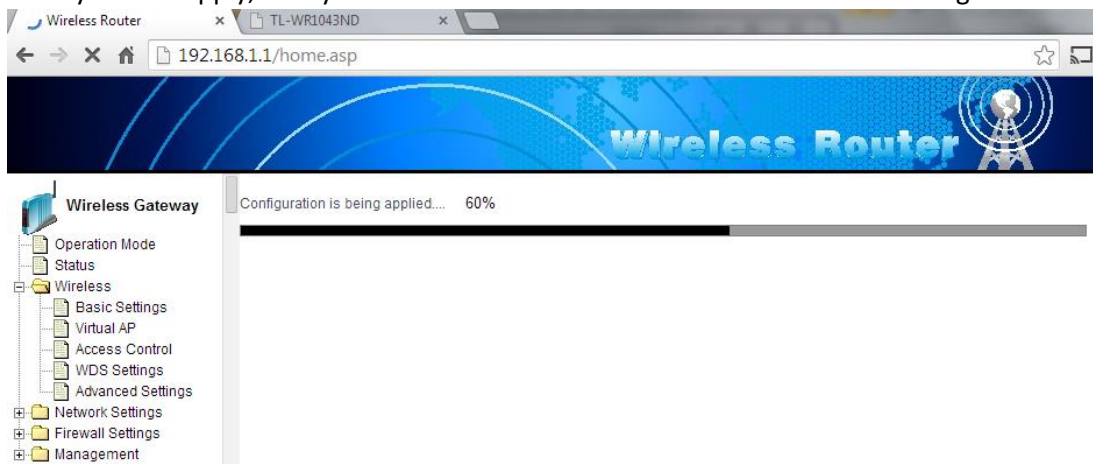


4. Wireless settings

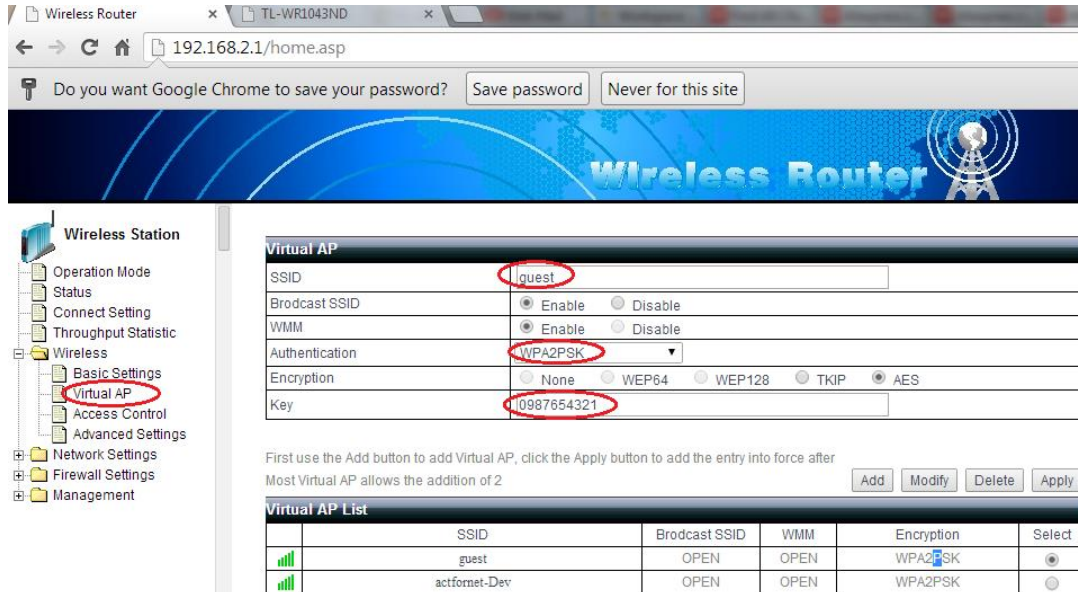
Wireless settings in bridge mode is no difference than Gateway mode. At a minimum, you need to configure the SSID(network name), region, authentication scheme and the key.



After you click apply, the system will take a few seconds to make the new settings take effect:



In some cases, you may want to set up virtual access point to separate the wireless network. N900 supports up to 2 virtual access points. Click “Virtual AP”, supply the SSID, authentication scheme and key and then click “add”. After you click “Apply”, the system will reboot with newly added virtual access points:

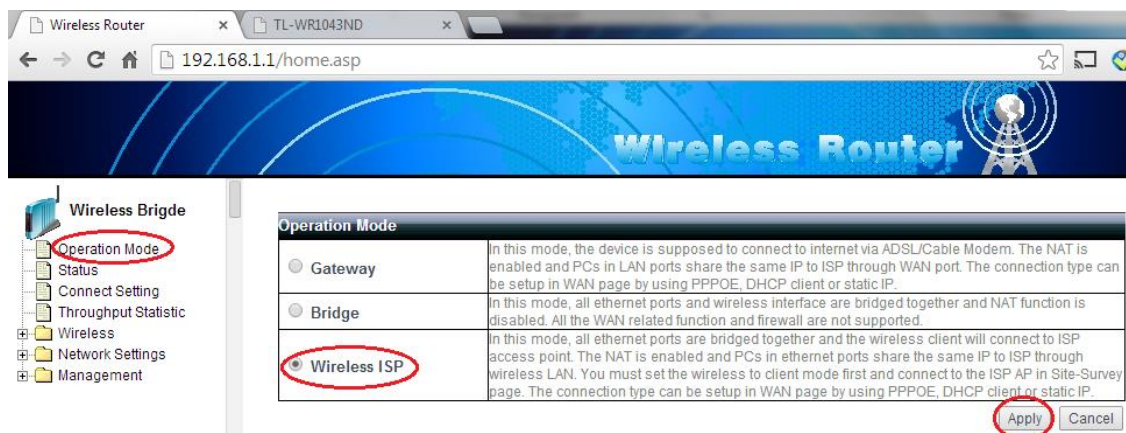


- Now you should be able to see the wireless network you just configured from your PC or tablet, smart phones, etc. Click the network and supply the password/key you just configured to access the network.

3.4 Wireless ISP mode

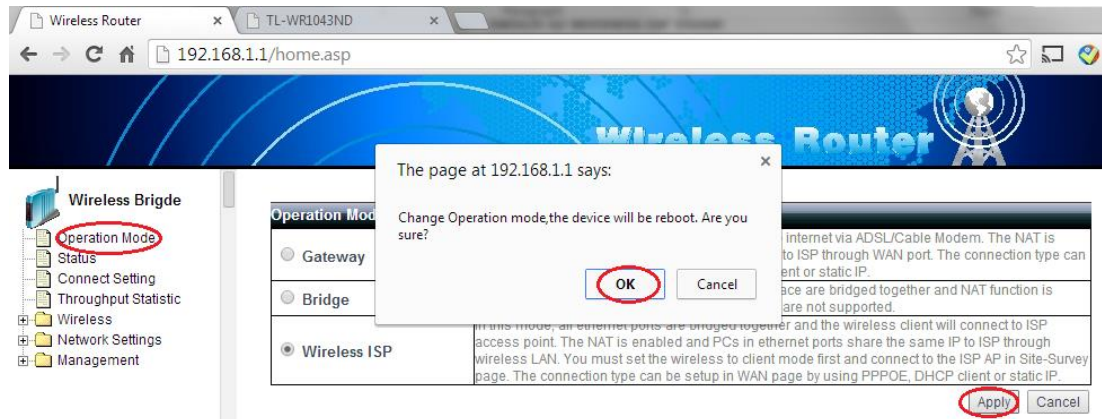
- Switch to Wireless ISP mode

Since the default mode is not bridge mode, you need to manually change the operating mode as following:

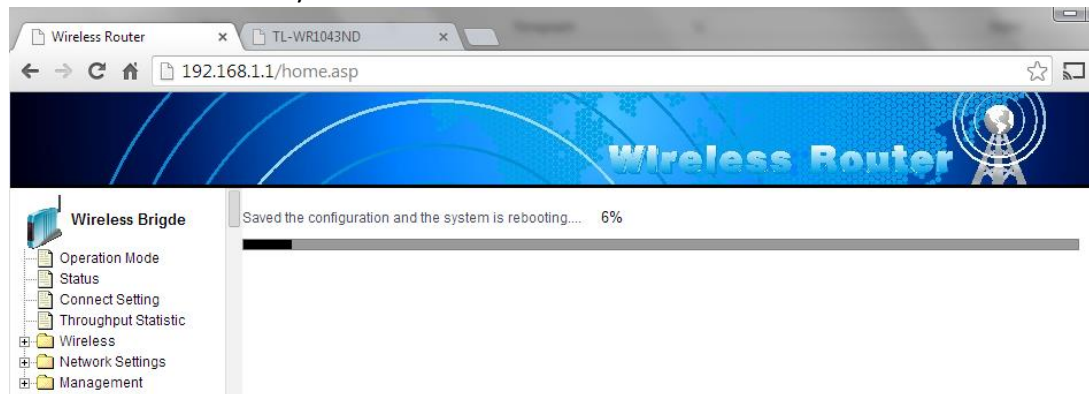


After you click “Apply”, the system will ask you to confirm whether to reboot the system to make the change take effect.

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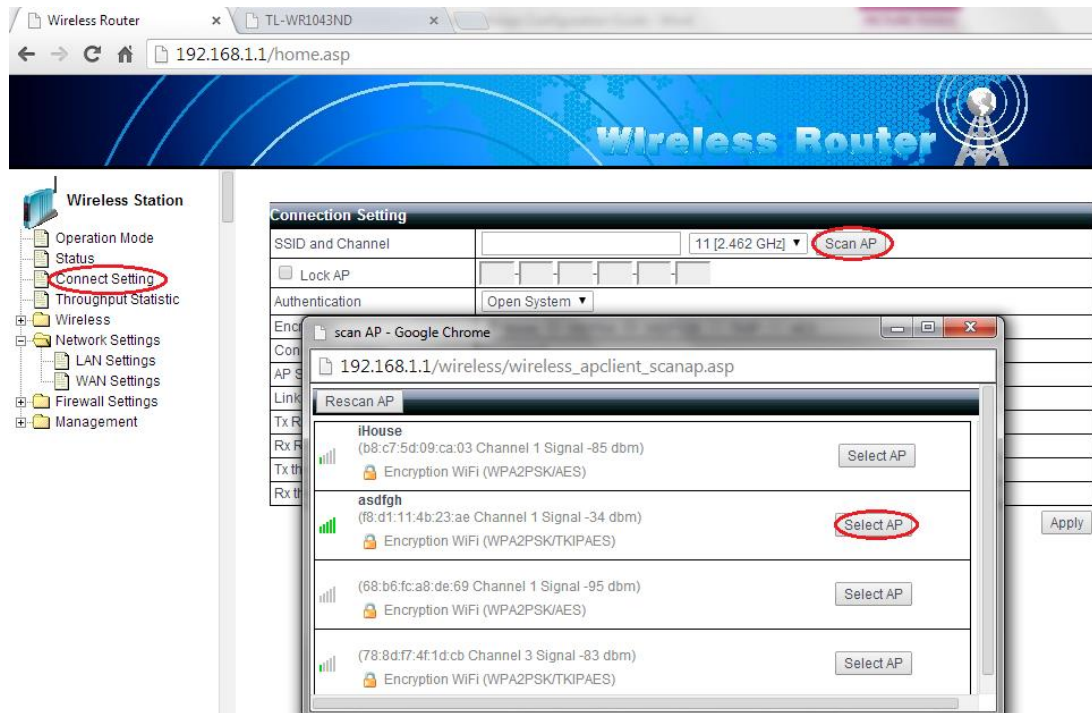
Please OK and wait for the system to come back after reboot.



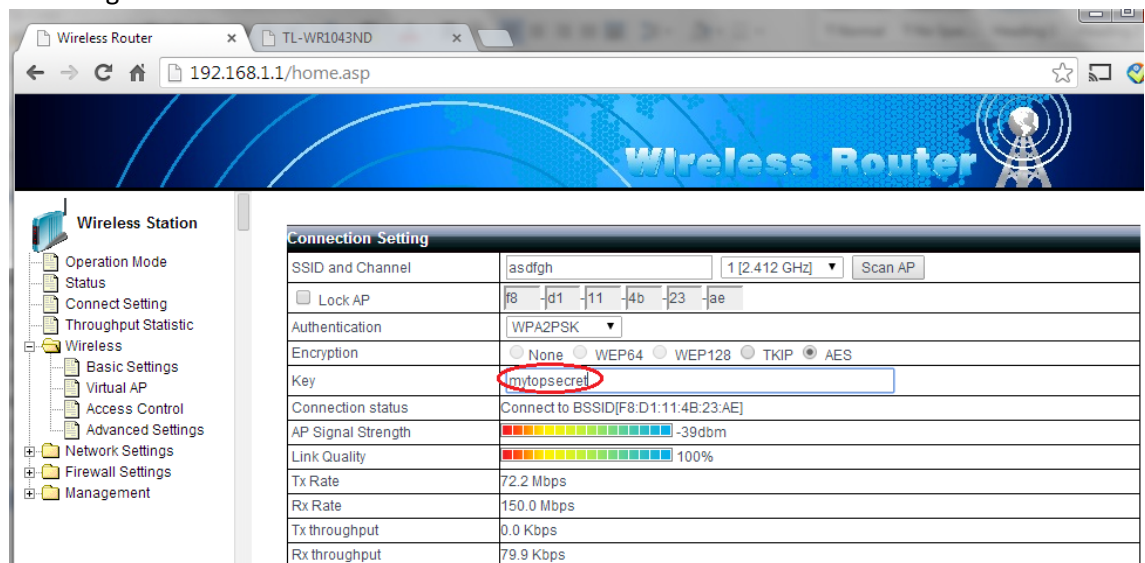
2. Wireless client setting

In wireless ISP mode, the wireless router acts as a wireless client to the access point of the service provider. Click "Connect Setting" that leads to the connection setting page where all the wireless client related settings are configured. Click "ScanAP" and select the desired access point from the list as below:

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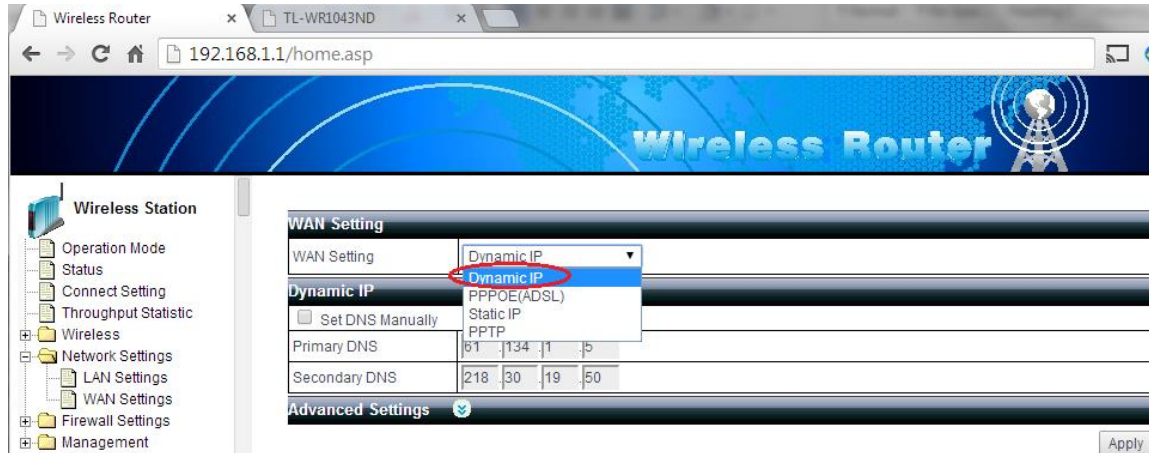
After you select the AP from the list, the Authentication field will be auto-populated accordingly. You just need to type in the password that is supplied by your service provider. After you click “Apply”, the system will reboot to make the change take effect. If the setting is correct, the wireless router should connect to the service provider access point like following:



3. WAN setting

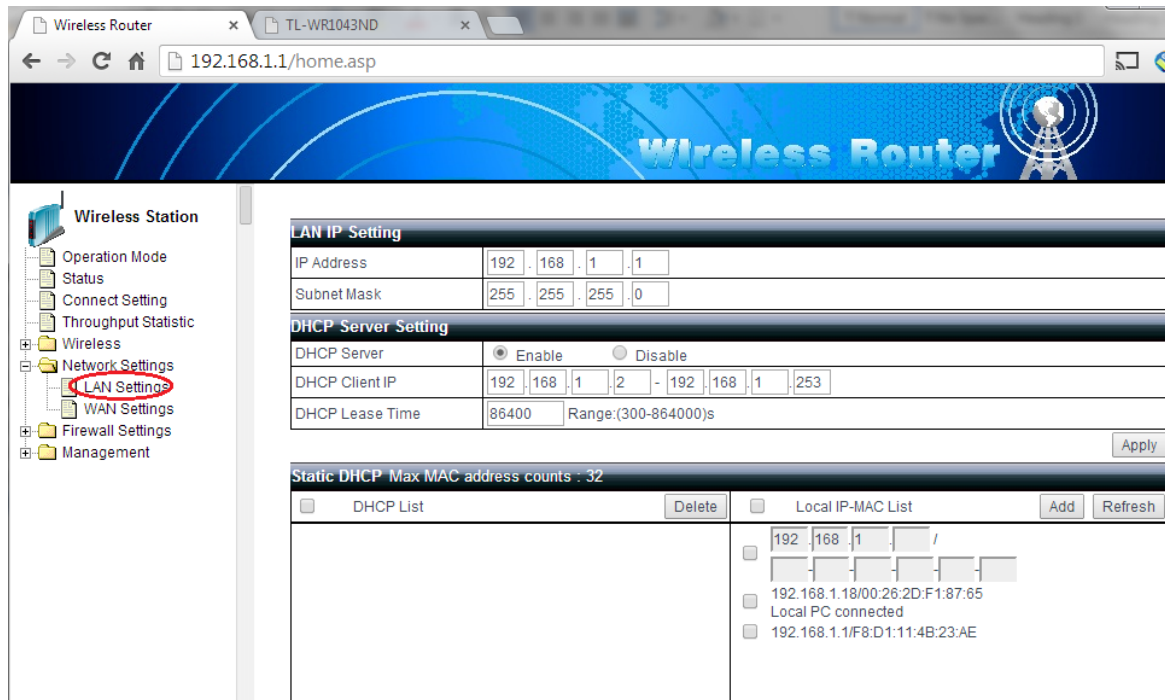
In wireless ISP mode, the WAN port refers to the logic port the wireless client uses to connect to the service provider. In other words, the WAN port of the wireless router is the only port visible from the service provider. Please keep it in mind that wireless router has NAT enabled by

default and all the PCs on the local network will share the WAN IP address to access Internet. In most case the default setting “dynamic IP” should work. But we can change it to static IP or PPPoE as well if needed.



4. LAN settings

LAN port is intended to connect all local PCs. Usually you need to enable DHCP server to automatically assign IP address to local PCs, like following:



5. Wireless settings

Settings in this section are used to control how local PCs, tablets or smart phone connect to the wireless router using WiFi. The setting is the same as Gateway mode or Bridge mode. At a minimum, you need to configure the SSID(network name), region, authentication scheme

and the key.

Basic Setting		
Status	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable
SSID	actfornet	Mode B,G,N
Regional	FCC	Channel 11 [2.462 GHz]
Broadcast SSID	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable
WMM	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable
Authentication	WPA2PSK	
Encryption	<input type="radio"/> None <input type="radio"/> WEP64 <input type="radio"/> WEP128 <input type="radio"/> TKIP <input checked="" type="radio"/> AES <input type="radio"/> TKIP/AES	
Key	*****	

Apply

After you click apply, the system will take a few seconds to make the new settings take effect:

Configuration is being applied.... 60%

In some cases, you may want to set up virtual access point to separate the wireless network. N900 supports up to 2 virtual access points. Click “Virtual AP”, supply the SSID, authentication scheme and key and then click “add”. After you click “Apply”, the system will reboot with newly added virtual access points:

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The screenshot shows the configuration page for a Wireless Router (TL-WR1043ND) at the IP address 192.168.2.1. The left sidebar shows the 'Wireless' menu expanded, with 'Virtual AP' selected. The main content area displays the 'Virtual AP' configuration form. The SSID is set to 'guest', Broadcast SSID is enabled, WMM is enabled, Authentication is set to WPA2PSK, Encryption is set to AES, and the Key is 10987654321. Below the form, there is a 'Virtual AP List' table showing two entries: 'guest' and 'actfornt-Dev'. The 'guest' entry is selected.

Wireless Router

192.168.2.1/home.asp

Do you want Google Chrome to save your password? Save password Never for this site

Wireless Station

- Operation Mode
- Status
- Connect Setting
- Throughput Statistic
- Wireless
 - Basic Settings
 - Virtual AP**
 - Access Control
 - Advanced Settings
- Network Settings
- Firewall Settings
- Management

Virtual AP

SSID: guest

Broadcast SSID: ☒ Enable ☐ Disable

WMM: ☒ Enable ☐ Disable

Authentication: WPA2PSK

Encryption: ☐ None ☐ WEP64 ☐ WEP128 ☐ TKIP ☒ AES

Key: 10987654321

First use the Add button to add Virtual AP, click the Apply button to add the entry into force after
Most Virtual AP allows the addition of 2

Add Modify Delete Apply

Virtual AP List

	SSID	Broadcast SSID	WMM	Encryption	Select
	guest	OPEN	OPEN	WPA2PSK	<input checked="" type="radio"/>
	actfornt-Dev	OPEN	OPEN	WPA2PSK	<input type="radio"/>

- Now you should be able to see the wireless network you just configured from your PC or tablet, smart phones, etc. Click the network and supply the password/key you just configured to access the network. After the wireless connection is up, you should be able to access Internet.